

## **REMARKS**

Upon entry of the present amendment, claims 1, 3, 6-7, 12, 19-32, and 34-48 are all the claims pending in the application. Claims 1, 7, and 19 have been amended, and new claims 47-48 have been added. Support for the claim amendments and the new claims can be found throughout the specification and originally filed claims. Specifically, support for the current claim amendment can be found in at least paragraphs [0012], [0057], and [0060] of U.S. Published Application No. 2005/0113657. Moreover, support for the new claims can be found in at least Figures 3A, 3B, and 3D, Examples 1-4, and paragraphs [0017], [0019]-[0020], [0021], [0044], and [0058] of U.S. Published Application No. 2005/0113657. Accordingly, no new matter has been introduced by these amendments to claims.

## **Claim Rejections Under 35 U.S.C. § 103**

Applicants thank the Examiner for withdrawing the previous obviousness rejections with respect to the rejection(s) of claim(s) 1, 3, 6, 7, 12, 19-32 and 34-36. Applicants assert that the withdrawal of the obviousness rejection is indicative that the claims are patentable over Alcala and Lakowicz.

The Office Action of 8 November 2007 rejected claims 1, 3, 6, 7, 12, 19-32, 34, 35, 37, 38 and 40-46 under 35 U.S.C. §103(a) as allegedly “unpatentable over Alcala et al. '405 (previously cited) further in view of Lakowicz et al. '534 (previously cited) further in view of Crowley '229 (USPN 6,289,229).” *Office Action of 8 November 2007*, page 2. Applicants have amended claim 1 to better capture the envisioned commercial embodiments. Applicants assert that the amendment to claim 1 renders moot all outstanding claim rejections, because the cited arts fail to teach each and every element of the presently claimed invention. Specifically, the cited references fails to teach any device wherein an optical fiber is attached to a sensing element, and wherein a tip houses and protects the optical fiber and sensing element. The combination of Alcala, Lakowicz, and Crowley fails to disclose these features. Accordingly, because the combination of references fails to disclose each and every element of the claimed invention, the cited references fail to render obvious the presently claimed invention.

In addition, the Office Action alleges that Crowley “teaches the use of a needle or catheter as a cover/tip of a sensing device in order to be able to easily introduce a sensing device

within the body of a subject ... ." *Office Action of 8 November 2007*, page 2. A careful reading of Crowley, however, reveals that the device in Crowley does not contain optical fibers in the needle. Specifically, Crowley states that its device comprises "a spectrometer module that includes a light source and a light detector for placement inside a body such that optical conduits are not necessary to deliver light signals ... ." *US Patent No. 6,289,229*, Col. 3, ll. 45-47. Thus, Crowley specifically teaches away from using a tip to encase an optical conduit. In other words, given the Crowley reference, one would have no reason to substitute the complete optics as taught in Crowley for an optical conduit as presently claimed.

Moreover, Applicants assert that it would not be a mere matter of substituting the optics in Crowley for the optical fiber as currently claimed the present invention. Indeed, placing an optical conduit inside the tip of a needle casing, wherein the optical conduit is in optical connectivity with the sensing element, is rife with problems. For example, Applicants attempted to use a mechanical housing or sleeve to maintain the optical connectivity between the polymeric matrix and the optical fiber. This mechanical housing approach was unable to maintain the matrix/fiber connectivity, in part, because of the shrinking of the polymeric matrix. In another attempt to maintain optical connectivity between the polymeric matrix and the fiber, applicants attempted to mold the polymeric matrix to the inside walls of a catheter which surrounded the optical fiber. This molding approach, resulted in inaccurate response times of the sensing element. Applicants also attempted to place the matrix on top of the fiber optic, without a needle or other protective sleeve. The unprotected fiber was brittle and produced inconsistent results.

The Office Action also rejected claims 36 and 39 under 35 U.S.C. 103(a) as allegedly "being unpatentable over Alcala et al. '405, further in view of Lakowicz et al. '534 further in view of Crowley '299, as applied to claim 1, further in view of Darrow et al. '651 (previously cited)." *Office Action of 8 November 2007*, page 2.

The inadequacies of the combination of Lakowicz, Alcala and Crowley have been discussed herein. Applicants assert that Darrow does not cure these deficiencies. Indeed, the Examiner cites Darrow because the reference allegedly "teaches the use of a reference group having its excitation and emission wavelengths similar to a fluorophore of interest ... ." *Office Action of 8 November 2007*, page 3. Darrow, however, fails to account for a tip housing and

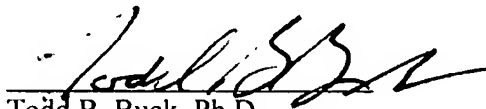
protecting an optical fiber in optical connectivity with the sensing element. Thus, the combination of Lakowicz, Alcalá, Crowley and Darrow fails to teach each and every element of the claimed invention as presently claimed. Furthermore, the Examiner provides no reason that one of skill in the art would combine Lakowicz, Alcalá, Crowley and Darrow to attempt to create the presently claimed invention.

### **Conclusion**

Applicants have amended claims 1, 7 and 19 to better capture the envisioned commercial embodiments. Applicants have also added new claims 47 and 48. Applicants assert that the amendments to the claims render moot the remaining obvious this rejections.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Todd B. Buck, Ph.D.  
Registration No. 48,574

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON DC SUGHRUE/106790

**46851**

CUSTOMER NUMBER

Date: 10 March 2008